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Cheilodactylus (Goniistius) francisi, A New Species of Morwong (Perciformes: Cirrhitoidea) from the Southwest Pacific

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ABSTRACT. A new morwong, *Cheilodactylus (Goniistius) francisi*, is recognized from southwest Pacific Islands (Lord Howe Island, Middleton Reef, Kermadecs, and probably Elizabeth Reef, Norfolk Island, and New Caledonia). Distinguishing features from *C. (G.) vittatus* (Hawaiian Islands) comprise gill-raker counts, caudal-fin coloration, and notable molecular divergence.

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Morwongs are cirrhitoid fishes of subtropical and temperate marine nearshore waters, occurring throughout the Southern Hemisphere, northwest Pacific, and Hawaiian Islands (Smith, 1980; Randall, 1983). They are usually solitary, occurring demersally over reef substrates and feeding on small benthic invertebrates (Sano & Moyer, 1985; Cappo, 1995; McCormick, 1998). The taxonomy of morwongs and other cirrhitoids is highly contentious at the levels of species recognition, generic assignment, and familial allocation (Allen & Heemstra, 1976; Smith, 1980; Randall, 1983; Lamb, 1990; Greenwood, 1995; Burridge, 1999; Burridge & White, 2000; Burridge & Smolenski, 2004).

Cheilodactylus (Goniistius) vittatus Garrett, 1864, thought endemic to the Hawaiian Islands, was provisionally recognized from New Caledonia and Lord Howe Island in the southwest Pacific based on photographs of live specimens viewed by Randall (1981, 1983), although he noted that positive identification should await a direct comparison of specimens. This species was later documented at the Kermadec Islands by Francis *et al*. (1987), but based on the key developed by Randall (1983), that may not be sensitive to any morphological distinctiveness of southwest Pacific specimens. A recent study of molecular variation within *Goniistius* Gill, 1862 revealed that divergence of Hawaiian *C. (G.) vittatus* from a putatively conspecific southwest Pacific individual was equivalent to that observed during interspecific comparisons within the subgenus (Burridge & White, 2000). Consequently, the first morphological comparison of Hawaiian and southwest Pacific "*vittatus*" individuals has been conducted, and additional molecular data have been collected to further assess the taxonomic significance of genetic divergence observed across the equator; a new species from the southwest Pacific is described herein.

Materials and methods

To my knowledge, only seven specimens of southwest Pacific "*vittatus*" have been deposited in museum collections. One Kermadec Islands individual is deposited in Te Papa Tongarewa (Museum of New Zealand, NMNZ P17846). Two specimens have been obtained from Middleton Reef (Australian Museum, Sydney, AMS I.27134-003, AMS I.27139-006). One specimen has been obtained from Lord Howe Island (AMS I.17357-001). This was one of two specimens from Lord Howe Island reported